

WHAT IS CLAIMED IS:

1. An electret microphone comprising:
 - a housing having an acoustic port formed in a wall thereof;
 - a diaphragm assembly being electrically conductive and electrically coupled to the housing, the diaphragm assembly positioned adjacent to the wall;
 - an insulating spacer placed adjacent to the diaphragm on a side of the diaphragm opposite the acoustic port;
 - a backplate assembly, the backplate assembly with a protrusion radially extending from an outer circumference, the backplate in contact with the insulating spacer;
 - a body assembly, the body assembly molded of plastic, having a first end and a second end, the body assembly adapted for insertion into the housing and being hollow with an inner periphery adapted to receive the backplate assembly, the body assembly further comprising:
 - a conductive mount disposed in the body assembly, the conductive mount having a first end and a second end, the conductive mount electrically insulated from the housing by an outer circumference of the body assembly, the first end of the conductive mount disposed into the hollow portion of the body assembly for electrically coupling with the backplate assembly, the second end of the conductive mount extending to the second end of the body assembly; and
 - a printed circuit board adapted for coupling to the second end of the body assembly, the printed circuit board having a first surface and a second surface, wherein the first surface is electrically coupled to the second end of the conductive mount and the second surface is coupled to the housing, whereby an acoustic passage is formed at the sides of the protrusion between an inner circumference of the shell and an outer circumference of the backplate assembly, the acoustic passage allowing

air flow created by movement of the diaphragm responsive to acoustic energy coupled into the acoustic port.

2. The electret microphone of claim 1 wherein the housing comprises a connecting surface having a first position and a second position, wherein the connecting surface in the second position mechanically retains the printed circuit board.

3. The electret microphone of claim 1 wherein the housing comprises a connecting surface having a first position and a second position, wherein the connecting surface in the second position electrically contacts the second surface of the circuit board.

4. The electret microphone of claim 1 having the first end of the conductive mount disposed relative the first end of the body assembly a distance equivalent to the thickness of the backplate assembly, whereby a side of the backplate facing the diaphragm is level with the first end of the body assembly.

5. The electret microphone of claim 1 wherein the first end of the conductive mount is bonded to the backplate assembly at the protrusion.

6. The electret microphone of claim 1 wherein diaphragm assembly further comprises a support ring.

7. The electret microphone of claim 1 further comprising a dust guard disposed on a surface of the housing, the dust guard covering the acoustic port.

8. The electret microphone of claim 1 wherein the second end of the conductive mount further comprises a positioning projection member.

9. The electret microphone of claim 1 wherein the backplate assembly comprises a conductive backplate and a dielectric covering one surface of the conductive backplate.

10. The electret microphone of claim 1 wherein the backplate conductive backplate is free of holes.

11. A method for assembling an electret microphone comprising:
providing a housing;
inserting a diaphragm assembly into the housing;
inserting an insulating spacer into the housing;
inserting a backplate assembly into the housing, the backplate assembly having a disk shape;
coupling the backplate assembly to a body assembly, the body assembly comprising a conductive mount disposed in a hollow plastic molding, whereby an acoustic passage is formed between an edge of the backplate assembly and a surface of the hollow plastic molding;
coupling a circuit board to the conductive mount and the housing, thereby forming an electrical circuit between a first contact on the circuit board, the

conductive mount, a capacitor formed by the diaphragm assembly and the backplate assembly, the housing, and a second contact on the circuit board.

12. The method of claim 11 further comprising:
assembling a diaphragm and support ring to form the diaphragm assembly.

13. The method of claim 11 further comprising:
assembling a conductive backplate and a dielectric to form the backplate assembly.

14. The method of claim 11 further comprising:
forming a free end of the housing to contact the printed circuit board to electrically couple the circuit board to the housing.

15. The method of claim 14 wherein the forming the free end of the housing to contact the printed circuit board further comprises mechanically capturing the circuit board to the housing.

16. The method of claim 11 further comprises disposing an end of the conductive mount relative an end of the body assembly equal to a thickness of the backplate assembly, whereby a side of the backplate facing the diaphragm is level with the top end of the body assembly.

17. A capacitor microphone comprising:
a conductive housing;

a variable capacitor responsive to sound pressure level changes and mounted in the conductive housing, the variable capacitor comprising:

a movable diaphragm responsive to sound pressure level changes; and

a fixed backplate mounted in a hollow plastic body whereby an acoustic passage is formed between a periphery of the fixed backplate and a periphery of the hollow plastic body.

18. The capacitor microphone of claim 17 further comprising a printed circuit board coupled to the conductive housing and the variable capacitor for converting sound pressure level changes to electric impedance.

19. The capacitor microphone of claim 17 wherein the fixed backplate further comprises a dielectric material disposed on a side of the fixed backplate facing the diaphragm.

20. The capacitor microphone of claim 17 the conductive housing is mechanically bent over an edge of the circuit board to couple the printed circuit board to the conductive housing.